

U.S. Army Space and Missile Defense Command/U.S. Army Space Command

Yesterday

A Worldwide Command

Today

Tomorrow

U.S. Army



Space and Missile Defense Command

LTG Joseph M. Cosumano, Jr.
Commanding General



What Makes Missiles So Stressing . . .



ICBMs

- Threat to Homeland
- WMD



TBMs

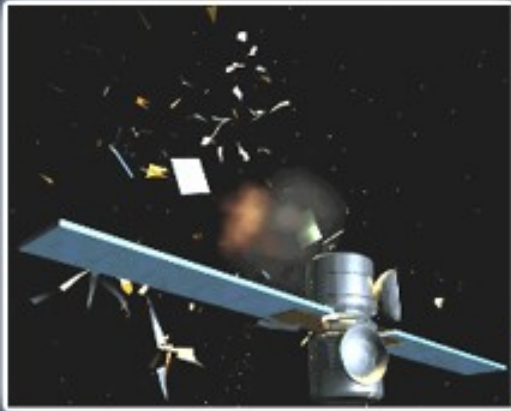
- Difficult to locate pre-launch
- Easy to operate
- WMD capable
- Weapons of Terror



Cruise Missiles

- Inexpensive
- Very difficult to detect
- Hard to differentiate
- Short reaction time
- WMD capable

Threat to US Space Assets



SATELLITES

- Kinetic Energy Munitions
- High-Powered microwaves
- Blocking
- Dazzling
- Obscurants
- EMP
- CCD measures

DATALINKS

- Jamming
- Interception
- False Data Insertion

GROUND STATIONS

- Natural Disasters
- Ground Attacks
- Cruise and ballistic missiles
- Bombs and artillery
- Sabotage



There is no Front Line in Cyber Warfare

Your computer is the target!!



Command Lineage

- 1794 Army Assumes Mission of Homeland Defense
- 1957 Soviets Test ICBMs and Launch Sputnik
- 1958 U.S. Army Launches Explorer I
- 1962 First Intercept of ICBMs
- 1963 First Satellite Intercept
- 1964 Kwajalein to Army (from Navy)
- 1967 Sentinel System
- 1969 Safeguard System
- 1974 Advanced Research Center Established
- 1978 DE Research Initiated
- 1984 First Hit-to-Kill Intercept of a Missile in Space
- 1987 First Hit-to-Kill Intercept of a Tactical Ballistic Missile



A Foundation of Operational and Technical Experience

Vision



LTG Joseph M. Cosumano, Jr.
Commanding General

- Fully integrate space capabilities into the Army to enable **decision superiority**.
- Provide layered **force protection** for combatant commanders.
- Equip soldiers and civilians with skills to support today's warfighter and tomorrow's **Objective Force**.

Mission

- **ASCC to USSTRATCOM** - conduct space ops & provide planning, integration, control & coord of Army forces & capabilities.
- Proponent for space & ground-based midcourse defense.
- Army operational integrator for global msl defense.
- Conduct mission related RD&A in support of Title 10 responsibilities.
- Focal point for desired characteristics & capabilities in spt of STRATCOM mission.

SMDC Missions

Army Component to US Strategic Command



Single Point of Contact
for Army Space Forces



Plan, Integrate Global
Army Missile Defense



Plan, Monitor
Army C4ISR Support

Plan, coordinate Army
IO core capabilities



Research &
Development, Analysis
and Combat Development



Plan for, Support
Global Strike Opns

Goals

Customer Focused Goals . . .

- ▲ Provide world-class **Space Support** to the joint warfighter and national security space team
- ▲ Improve our ability to provide the foremost global integrated **Air and Missile Defenses**
- ▲ Develop comprehensive and innovative planning and integration of Army **C4ISR, Global Strike, and Information Operations** capabilities across the full spectrum of military operations
- ▲ Develop innovative, affordable Space, Missile Defense, and other **Technology Solutions** and assist technology transition to operational systems
- ▲ Enhance **Workforce Excellence** and well being of soldiers, civilians and family members

. . . To Meet Stakeholder Requirements

Relationships



Relationships

General
Peter J. Schoomaker



Admiral
James O. Ellis Jr.



Admiral
Robert J. Natter



Admiral
Walter F. Dornan



Lieutenant General
Joseph M. Cosumano, Jr.



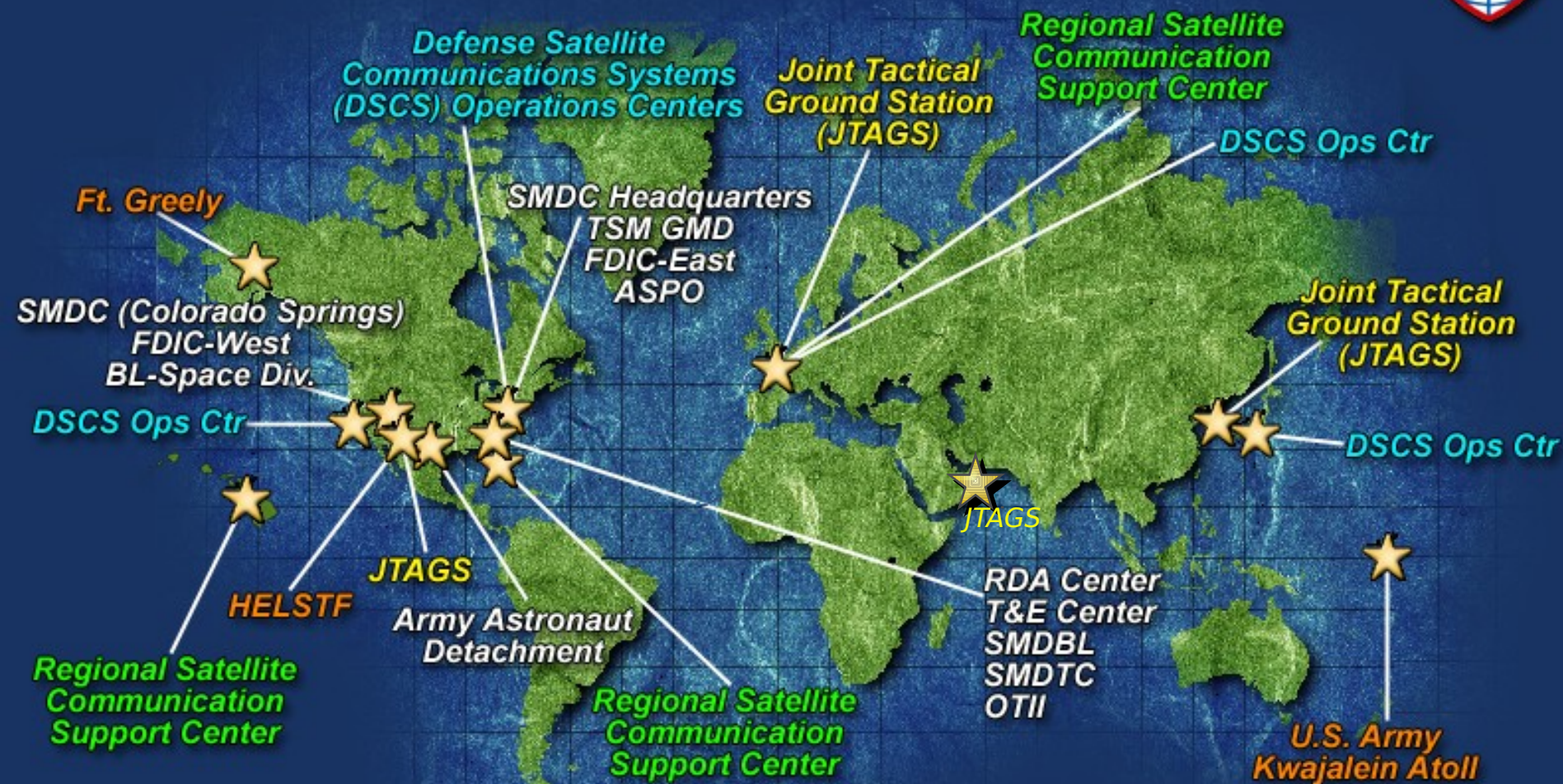
General
Lance W. Lord



Lieutenant General
Bruce Carlson



SMDC Permanent Locations



The Sun Never Sets on SMDC

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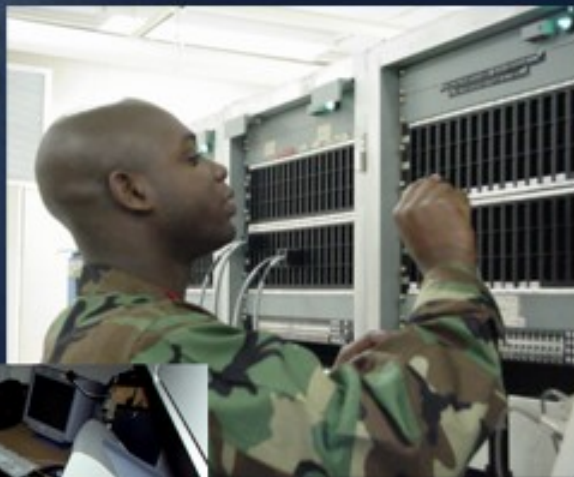
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SMDC - Colorado Springs

Force Provider

**DSCS Satellite
Control**



**Joint Tactical
Ground Stations**



**Ground-based
Midcourse
Defense**



**FA40 Space
Ops Officers**



**Army Space
Support Teams**

[Org Chart](#)

SMDC Operations Center

Mission

- Command and control US Army Space and Missile Defense Command assets
- Provide situational awareness
- Maintain operational status
- Integrate and coordinate Space, Integrated Air & Missile Defense, and CNO planning

Organizational Concept



Warfighter Benefit

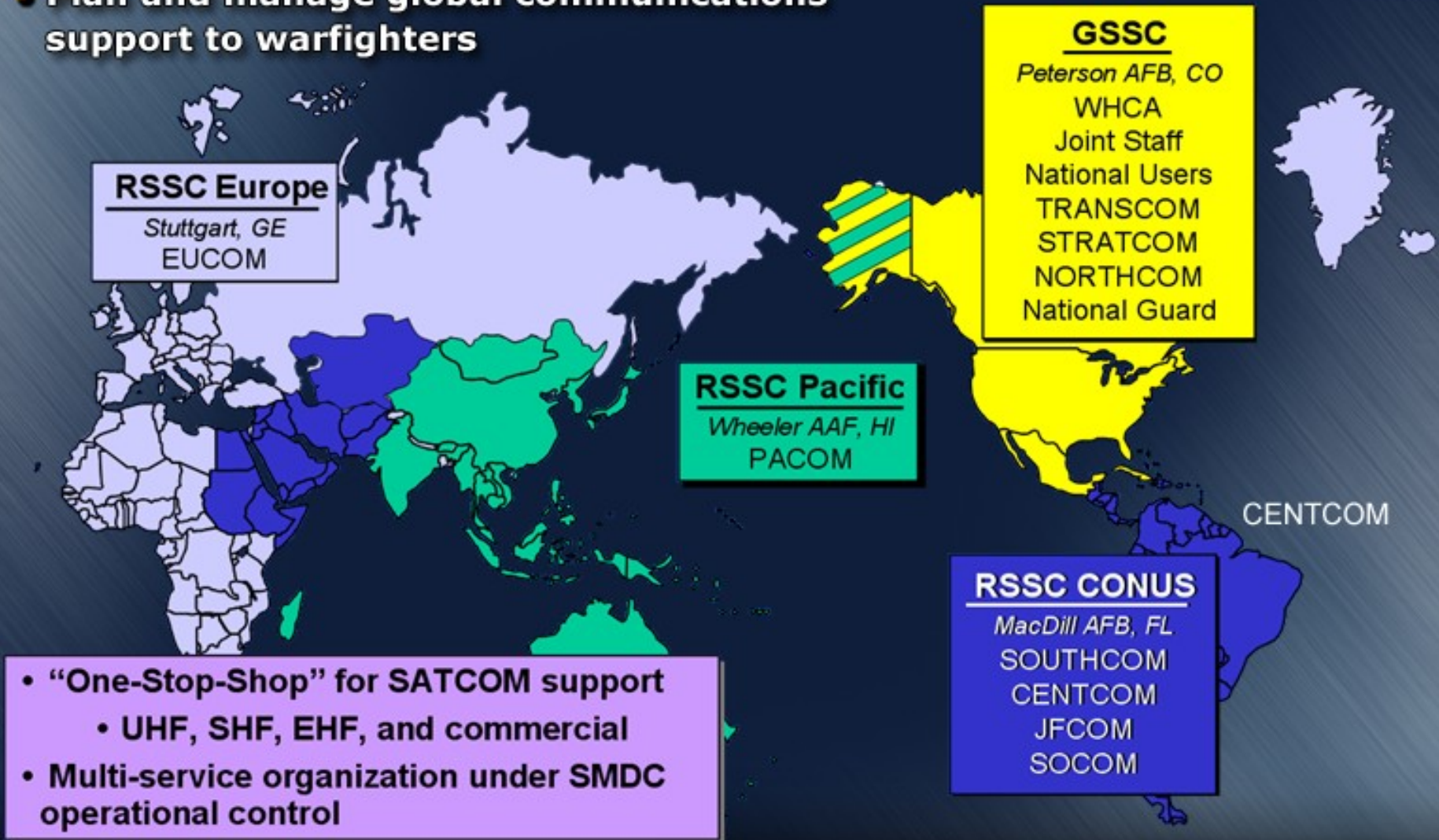
- 24/7 reachback for space operations officers and deployed space forces
- Satellite communications monitoring
- Computer Network Operations (CNO) support
- Theater Event System support
- Exercise / experiment coordination

[Org Chart](#)

Regional SATCOM Support Centers

Mission

- Plan and manage global communications support to warfighters



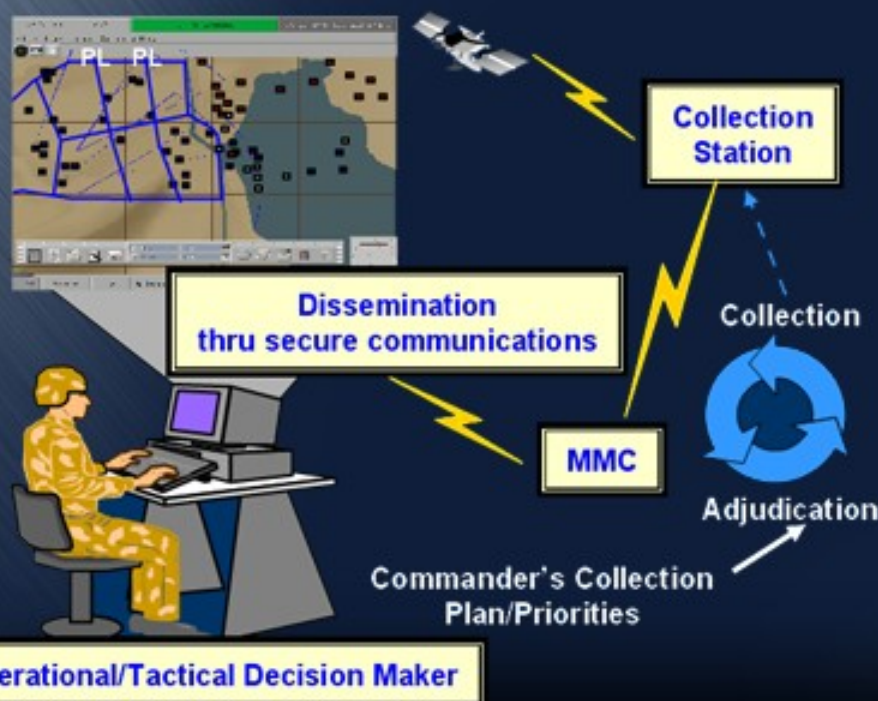
Space-Based Blue Force Tracking (SB/BFT) Mission Management Center (MMC)

Mission

Facilitate accurate, timely and **actionable** BFT information into Warfighters' Common Operating Picture (COP)

Operational Concept

- Army-led, multi-service
- Current support primarily to Cobra-type devices; developing support to others



Warfighter Benefit

- Increase situational awareness of friendly forces, a.k.a "Blue Forces"
- Timely response to Warfighter requests
- Dedicated troubleshooting of SB-BFT architecture

Spectral Operations Resource Center

Mission

- Coordinate and manage spectral production capabilities for USSTRATCOM
- Provide spectral information, products, and services
- Advocate joint warfighter spectral information requirements
- Integrate emerging spectral technologies

Operational Concept

- Multi-service and multi-agency
- Fixed and mobile assets
- Transition spectral capabilities to the user community



WARFIGHTER BENEFIT:

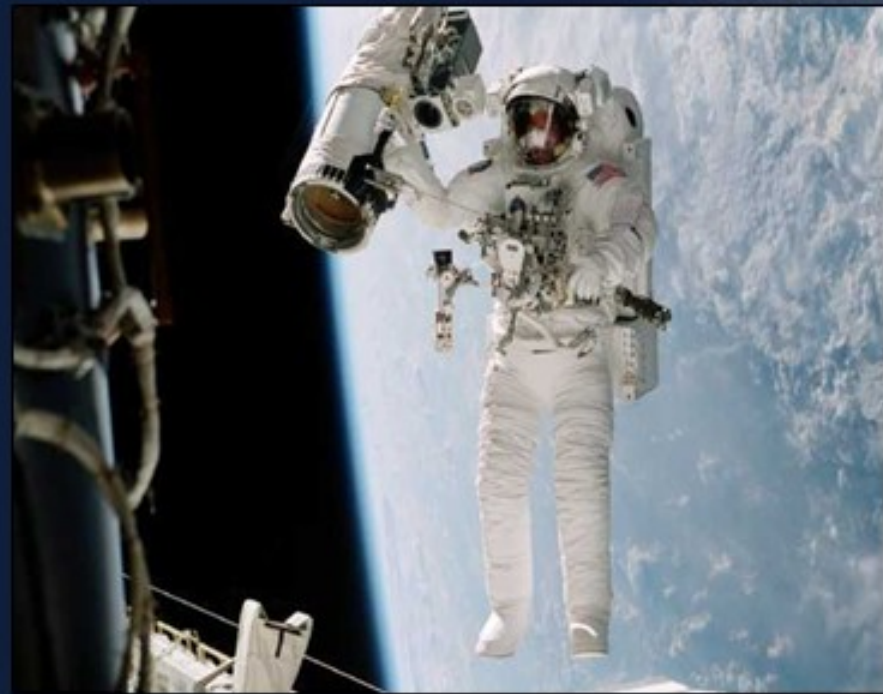
- Operational spectral experience
- Pool of analysts for joint applications
- Deployable and fixed-site capability
- Advocacy for emerging spectral systems
- In-place TPED for theater combatant commanders

Army Astronaut Detachment

Mission

Support our Nation's Human Space Flight Programs

- **Six Astronauts and One Space Operations Officers**
- **Space Shuttle and International Space Station Crew Members**
- **Operational Support for Ongoing Space Missions**



Providing Army Support to National Space Exploration

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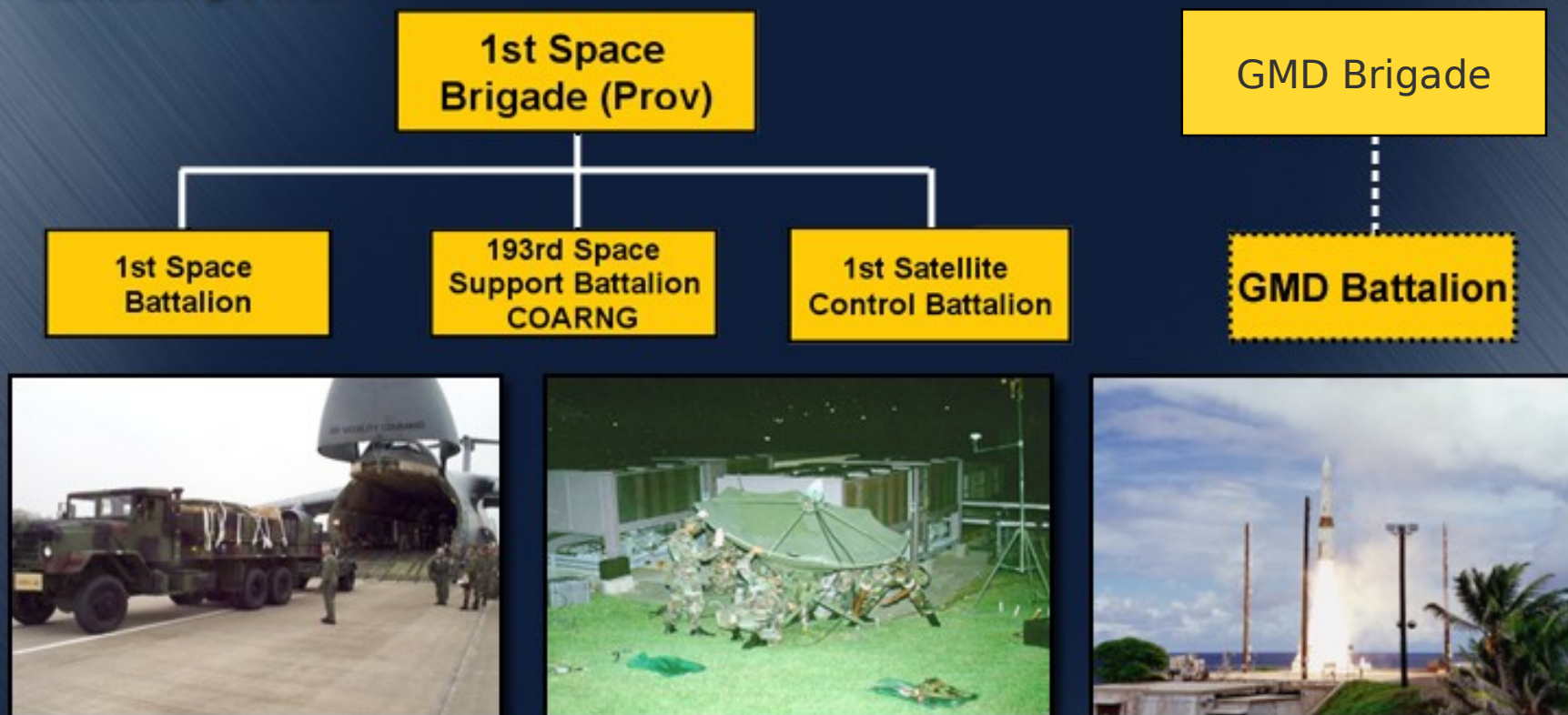
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Army Space Forces

Mission

Conduct continuous, global space support, space control, and space force enhancement operations supporting USSTRATCOM and combatant commanders, enabling the delivery of decisive combat power



Training, Deploying, and Sustaining Space Warriors

1st Space Battalion

Mission

- Provide Tactical Ballistic Missile Theater Early Warning
- Provide Space-based Capabilities and Expertise to Warfighter
- Provide Space Control
- Support Test and Evaluation



Bringing Space-Based Capabilities to the Warfighter

[Org Chart](#)

Army Space Support Teams



Army Space
Support

Team 1

USAR

Team 2

USAR

Team 3

Team 4

Team 5

Mission

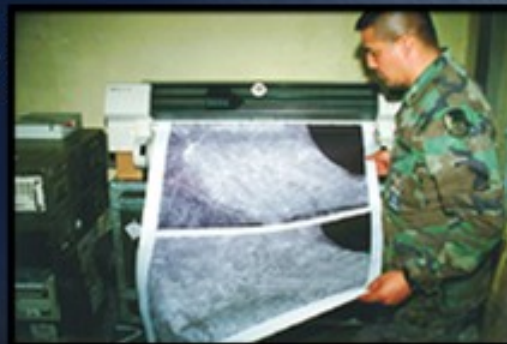
Deploy worldwide to provide force enhanced space support during operations and exercises

TEAM LEADER	MAJOR	FA40
OPERATIONS OFFICER	CAPTAIN	25C
INTELLIGENCE OFFICER	CAPTAIN	35D
TEAM NCOIC/SATCOM NCO	SERGEANT	31S20
TOPOGRAPHIC NCO	SERGEANT	81T20
INFORMATION SYS NCO	SPECIALIST	74B10



ARSST Teams were successful in teaching our soldiers the use of the PLGR when it first came out

ARSST NCO produces maps for V Corps Long Range Reconnaissance



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1st Satellite Control Battalion

Mission

Provide Network and Payload Control of Communications Satellites



Delivering Worldwide Satellite SHF Communications Support

What Goes Over the Defense Satellite Communications System

Seven Defense Information Systems
Network Essential Services

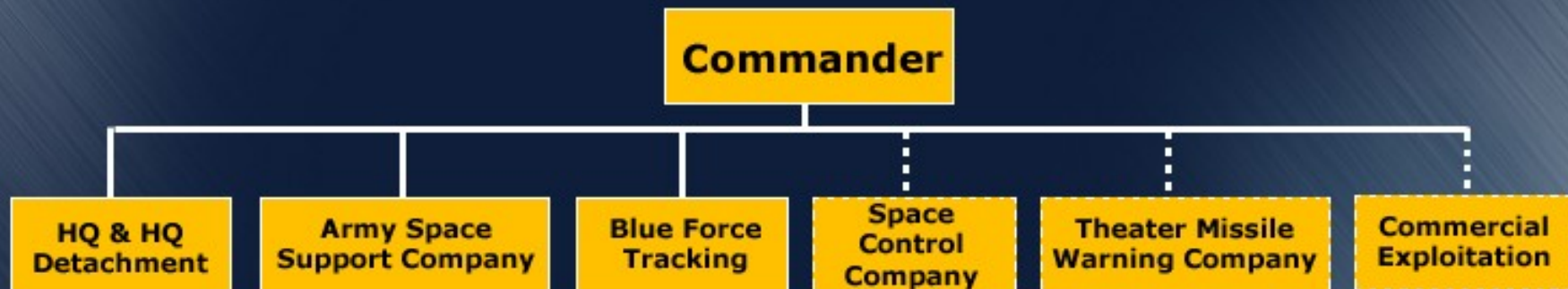
- **Defense Switch Network**
- **Defense Messaging System**
- **Video Teleconferencing**
- **Red Switch**
- **Telemedicine**
- **SIPRNET**
- **NIPRNET**

193rd Space Support Battalion Colorado Army National Guard



Mission

- **Pre-mobilization:** Trains Teams and Sections, Supports Exercises and Simulations
- **Mobilization:** Mobilizes and Deploys to Perform Theater-level Space Missions



Supporting the Warfighter

Ground-based Missile Defense Brigade

Mission

- Execute tactical initial defensive operations for the combatant commander
- Conduct day-to-day training and test bed support



Shielding the Nation and its Allies

TSM Ground-based Midcourse Defense

Mission

**Joint User Representative, Centralized Manager,
and Integrator for all DOTMLPF Products for the
Ground-based Midcourse Defense (GMD) System**



Defense Support Program
/ Space Based Infrared
Radar System



Ground-based Interceptor



Battle Management
Communications, Command,
Control Center



Upgraded Early
Warning Radar



X-Band Radar

Executing DOTMLPF integration for GMD

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Force Development and Integration Center



Mission

- Force Developer and Combat Developer
- Army Proponent for Space and National Missile Defense
- Integrator of Army and Joint Theater Air / Missile Defense Activities
- Proponent for Army Space Education and Training

Materiel



Training



Leader Development



Personnel



Facilities



Organization



Doctrine



Space and Missile Defense Command Huntsville



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From Concepts to Operations

“Cradle to Grave”



[Org Chart ►](#)

Since September 11, 2001



- Air defense assessments for Cdr NORAD
- Future Operational Capability TOC
- Liaison and planning support
- Defense Satellite Communications System
- Deployed Space Electronic Warfare Detachment
- Deployed Army Space Support Teams
- Deployed JTAGS Team

SMDC Ongoing Operations

Operation Iraqi Freedom

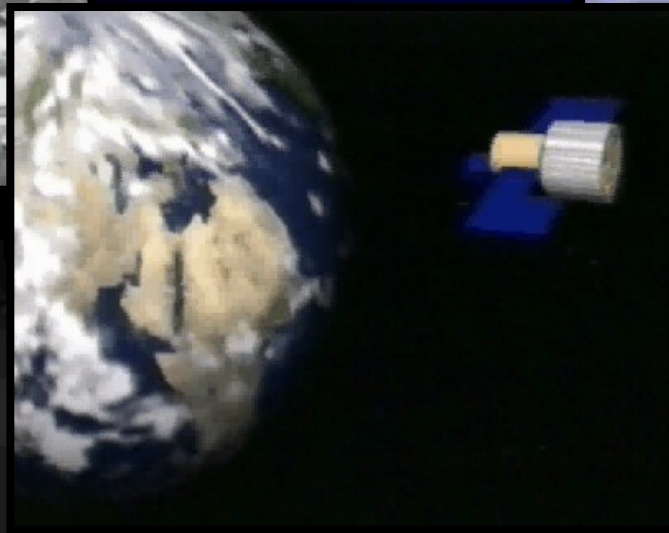


- Space Support to CENTCOM, CFLCC, V Corps, I MEF, and SOF
- Space Electronic Warfare Detachment (SEWD)
- Spectral Processing Exploitation Cell - Transportable (SPEC-TR)
- Office of Coalition Provisional Authority (Formerly ORHA)

Organization of the Future . . . Today

If We Get It Right . . .

Organization of the Future ... Today

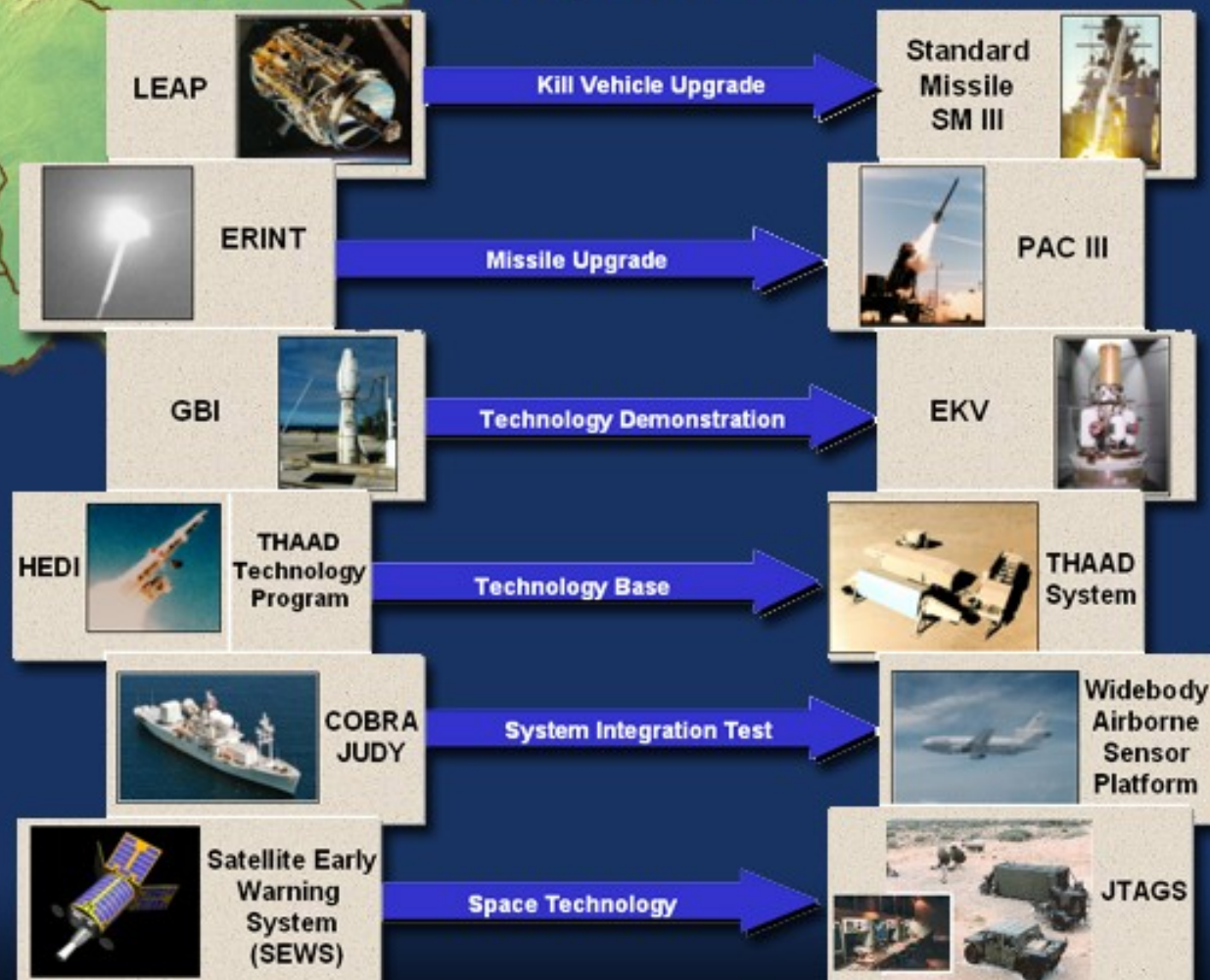


Keep the Country Safe From Missile Attack
Protect Our Forces From Theater Missile Attack
Ensure Uninterrupted Space and IO Capabilities For Our Nation

Space and Missile Defense Technical Center



Executes Space And Missile Defense Technology Research, Development, Testing And Evaluation



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Space & Missile Defense Battle Lab



Mission

Deliver Space, Missile Defense, Information Operations, C4ISR, and Global Strike Innovations to the Warfighter

Vision

The Leading Transformation Agent for Innovations within STRATCOM Mission Areas



[Org Chart ►](#)

Space & Missile Defense Test & Evaluation Center

Mission

MACOM lead organization and executing agent for developmental and operational test and evaluation.



Ft. Greely, AK



Huntsville, AL



White Sands, NM



Kwajalein Atoll,
Republic of the
Marshall Islands

[Org Chart](#) ►

Fort Greely, Alaska

Mission

Provide Base Operation and Security



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High Energy Laser Systems Test Facility (HELSTF)

Mission

Test and Evaluate High Energy Laser Concepts and Technologies



White Sands, New Mexico



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U.S. Army Kwajalein Atoll /Reagan Test Site

Mission

- *Provide a comprehensive missile system testing environment*
- *Support space operations and surveillance*
- *Represent PACOM in the Republic of the Marshall Islands and Kiribati*
- *Operate a community of excellence and sustain a quality workforce*



● San Francisco

● Honolulu

★ Kwajalein
Atoll

*Pacific
Ocean*

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Army Space Program Office



Fort Belvoir, Virginia

**Over
100 Systems
Fielded to Warfighters
In 29 Years.**

- Leverages National & Theater Capabilities (TENCAP) in direct support of Tactical Commanders
- Design, Develop, Procure, Test, Field and Sustain Systems that Task, Receive, Process and Disseminate Data from NRO Systems
- Mechanism to Transfer National (NRO) Technology into the Army
- Basis of emerging Joint ISR Architecture

Exploits National Assets to Support Warfighters

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SMDC Initiatives



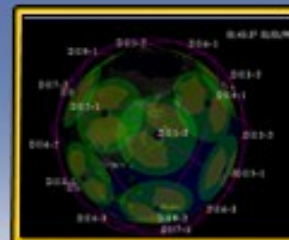
**Space & Missile
Defense War
Games**



**Tactical
High-Energy
Laser**



Eagle Vision II



**Space Based
Radar**



**Future
Operational
Capability TOC**



JLENS



**Hyperspectral
Imaging**



**Grenadier
BRAT**



**Tactical
Exploitation
System (TES)**



**Battlefield
Ordnance
Awareness**



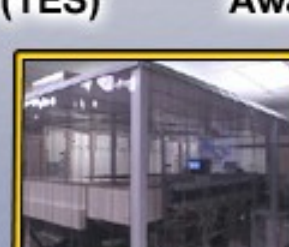
**Atmospheric
Interceptor
Technology**



**Functional Area 40
Space Operations**



ZEUS



**Solid State
Laser**



S

***upporting the Joint Warfighter
and the Nation***

M

ission-Focused

D

edicated to Excellence

C

ommitted Globally